

FOR DISCUSSION PURPOSES ONLY

ATTORNEY DOCKET NO.: SP03-091

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JUL 19 2005Remarks

In view of the above amendments and the following remarks, favourable reconsideration of the outstanding office action is respectfully requested.

Attached hereto is a page entitled "Version of Markings to Show Changes Made."

Claims 1-3, 5, 7-25 remain in this application. Claims 8-10, 21, and 24-25 have been amended. Claims 4 and 6 have previously been cancelled. New Claim 26 has been added.

1. § 112 Rejections

The Examiner has rejected Claims 24 and 25 under 35 U.S.C. § 112, first paragraph, asserting that the specification is not commensurate in scope with these claims. Claims 24 and 25 have been amended to limit pore sizes to "about 5 μm " and "between about 0.5 μm and 1.0 μm ", respectively. The Examiner has indicated that such an amendment would be deemed acceptable in overcoming the rejection under 35 U.S.C. § 112 (See Office Action p.2, ¶3). Applicants have amended the claims accordingly.

The Examiner has further rejected Claims 8-12 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended Claims 8 and 10 to clarify the compositional components to include "at least one of Co_3O_4 and NiO " (See Specification, p. 13, ¶41 and p. 14, ln 1).

Consequently, new Claim 26 contains a limitation previously contained in in Claim 8.

2. § 102 Rejections

The invention of the present application pertains to a porous substrate having an inorganic composition inclusive of a tint. The tinted porous substrates

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provide significant advantages over un-tinted porous layers. Their enhanced detection of biomolecules is attributable to the reduction in auto-fluorescence as provided by the selected tint. Undesirably, previous attempts to reduce auto-fluorescence have included methods to darken commercial substrates containing reducible ions, thus resulting in adverse porous structure. The tinted porous region of this invention has a composition incorporating a colorant component, including a transition metal ion. As specifically designed, and demonstratively so, the tinted porous substrate reduces the relative level of reflectance and auto-fluorescence detected.

The Examiner has rejected claims 1-3, 5, 7, 13-20, and 23 under 35 U.S.C. § 102(b) as being anticipated by Pantano et al. (U.S. Patent Application No. US2003/0054176). Specifically, the Examiner maintains the contention that ZnO is in fact a tinting agent (See Office Action, p.4, ¶1).

Applicants respectfully submit that independent Claims 1 and 18 are patentable over Pantano. The claimed invention as recited in amended independent Claim 1 follows:

1. (Currently amended) A porous substrate comprising: a support; and an inorganic porous region on a surface of said support, the inorganic porous region having a surface capable of immobilizing probe molecules, the inorganic porous region having a tint and exhibits a reduced level of auto-fluorescence of at least about 15% relative to a comparable non-tinted porous substrate surface.

18. (Previously amended) A tool for performing biological or chemical assays, the tool comprises a non-porous support; and an inorganic porous region on a surface of said support, the inorganic porous region having a surface capable of immobilizing probe molecules, the inorganic porous region having a tint and exhibits a reduced level of auto-fluorescence of at least about 15% relative to a comparable non-tinted porous substrate surface.

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The teachings of Pantano differ significantly from the present invention as recited in independent Claim 1. Independent Claim 1 recites a limitation where a tint is included in the inorganic porous region. Pantano fails to teach or suggest a colorant included in the composition of an inorganic porous region that produces a tint. Instead, the Examiner asserts that Pantano teach a tinted porous region having a colorant component including a transition metal ion (Zinc; [0051]). Applicants continue to contend that any Zinc composition will not serve as a colorant when incorporated into glass. In order to support this position, applicants hereby submit an affidavit under 37 C.F.R. § 1.132. In addition, none of the references cited include these further considerations. Accordingly, Applicants respectfully submit that the aforementioned substantial differences between Pantano and the independent Claims 1 and 18 and their associated dependent Claims 2, 3, 5, and 7-26 are indicative of the patentability of the present invention.

A rejection under 35 U.S.C. § 102 requires that the Pantano reference, in order to anticipate the present invention, teach or suggest all the claim limitations disclosed by the claim. The claimed invention requires the substrate of this invention have a tinted porous region that is not taught by the Pantano reference or any of the cited references. Since the Pantano reference does not include these limitations, it cannot anticipate Claims 1, 18, or any claim dependent on Claims 1 or 18. Therefore, this rejection should be withdrawn.

3. § 103 Rejections

The Examiner has rejected Claims 8, 9, 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Pantano et al. (US2003/0054176) in light of Mizuno et al. (US2002/0042068). Claims 10, 24, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Pantano in view of Tanner et al. (US2003/0003474). Claims 11 and 12 were rejected under

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35 U.S.C. § 103(a) as being unpatentable over Pantano in view of Mizuno, and further, in view of Young et al. (US 6,391,809).

Amended Claims 1-3, 5, 7-26 of the present invention all require a porous region having a tint.

Applicants respectfully submit that Pantano and Mizuno, either alone or in combination, do not render amended claims 8, 9, 21, and 22 obvious. In order to establish a prima facie case of obviousness, the Pantano and Mizuno references in combination must teach or suggest all the claim limitations. As previously discussed, Pantano fails to recite or suggest a porous region having a tint. Likewise, Mizuno does not teach or suggest a porous region having a tint.

Additionally, amended Claims 11 and 12 depend from amended Claim 8 and also recite a tint, and are therefore patentable over Pantano in view of Mizuno, further in view of Young.

Furthermore, Applicants respectfully submit that Pantano and Tanner, either alone or in combination, do not render amended claims 10, 24, and 25 obvious. Neither Pantano nor Tanner teach or suggest a porous region having a tint.

4. Conclusion

Based upon the above amendments, remarks, and papers of record, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests (re)consideration of the pending Claims 1-3, 5, and 7-26 and a prompt Notice of Allowance thereon.

Applicant believes that no extension of time is necessary to make this Response timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

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Respectfully submitted,

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